

# Numerical and Experimental Investigation of Meteor Ablation

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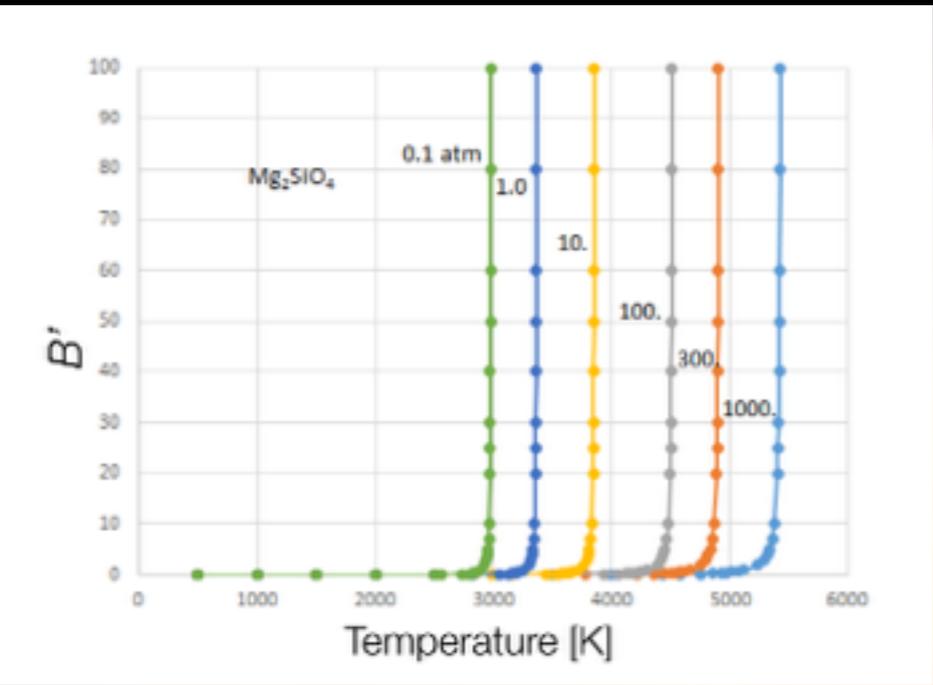
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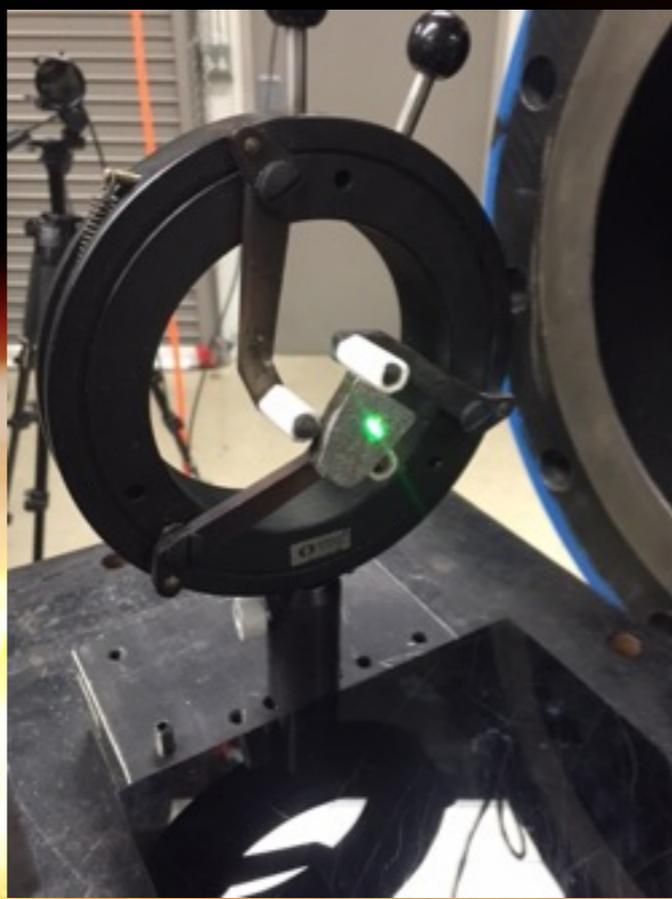
$$C_{II}(H_r - h_w) - \dot{m}\Delta h_v + \alpha q_r - \sigma\epsilon(T_w^4 - T_\infty^4) - q_{cond} = 0$$

convective heating
heat loss due to vaporization
absorbed radiation
re-radiated heat
heat loss due to conduction into body

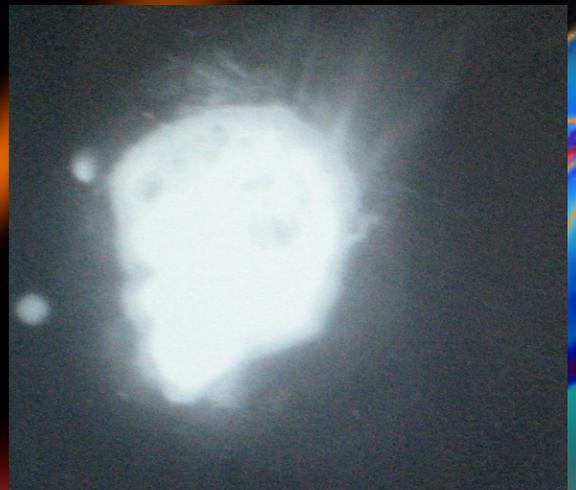
Surface Energy Balance for meteor ablation



Dimensionless mass blowing rate from equilibrium model



Chondrite model in sample holder for laser experiment



Frame from high speed video of meteorite vaporization and melting



Post-test meteorite sample

